REMARKS

Receipt of the Office Action of April 25, 2008 is gratefully acknowledged.

The examiner has objected to the drawings as "difficult to read." In reply, corrected drawings designated as REPLACEMENT SHEETS for figs. 1 - 3 are being submitted herewith.

Claims 8-14 have been examined and rejected under 35 USC 102(b) by Brutschin et al.

The Brutschin et al publication has been carefully considered against the invention as claimed. From this consideration, applicant has concluded that claims 8 - 14 patentably distinguish over Brutschin et al. Accordingly, the noted rejection is respectfully traversed. To better define the invention, claim 8 has been amended to include the subject matter of claim 9. As amended, claim 8 defines a piezoelectric element with two segments and exactly two electrodes.

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Brutschin et al. teaches a measuring apparatus that is distinguished from the present invention in at least two important ways.

1. First of all, Brutschin et al. use a homogeneously polarized piezoelectric element. In the discussion of the state of the art, Brutschin et al. state: "the piezoelectric element itself is homogeneously polarized" (paragraph [0005]). As Brutschin et al. define the object of their invention (paragraph [0007]) to improve the transmitting/receiving unit – which includes such a piezoelectric element –it can be assumed that the piezoelectric element of Bruschin et al. is also homogeneously polarized. Further, the description of the invention by Brutschin et al. gives no hint that the piezoelectric element should not be homogeneously polarized. This can also be taken from the description of the behaviour of a piezoelectric element (paragraph [0035]).

Contrary to this arrangement, the piezoelectric element of claim 8 as now amended includes two segments with opposite polarization.

Paragraph [0044] of Brutschin et al. - to which the examiner refers to in

the office action - deals with the polarization of the electrodes but not with the polarization of the piezoelectric element or of segments of the piezoelectric element. Brutschin et al. mention no different segments of the piezoelectric element.

2. Another important difference is that Brutschin et al. use a structure with at least two transmitting electrodes and two receiving electrodes. Hence, Brutschin et al. use at least four electrodes.

Amended claim 8 refers to exactly two electrodes. Brutschin et al. need their electrode structure with four electrodes in order to minimize the influence of disturbance signals. This structure is the invention of Brutschin et al. Hence, a person skilled in the art starting from Brutschin et al. would be deterred from reducing the number of electrodes to exactly two electrodes as this would contravene the intent of Brutschin et al.

Hence, there are two differences between the amended claim 8 and the state of the art. As Brutschin et al. provide no hint in this direction, the amended claim 8 is considered to be inventive.

Respectfully submitted,
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